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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,910	03/16/2001	Michael H. Myers	2807.2.22.1	6725

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2633

6

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/810,910

**Applicant(s)**

MYERS ET AL.

**Examiner**

M. R. Sedighian

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,12,13,18,19 and 21 is/are rejected.
- 7) ☒ Claim(s) 3-11,14-17,20 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.                      6) ☐ Other: \_\_\_\_\_

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1. Claim 1 is objected because of the following informality:

a) The phrase "the channels" in line 10, should change to --- the channel ---.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 12, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Gertel et al. (US patent No: 5,532,857).

Regarding claim 1, Gertel teaches an apparatus for providing a wavelength shifted and stabilized photonic signal (col. 1, lines 5-10 and fig. 1), comprising: a photonic input path (the path that is connected to laser 10) configured to carry a photonic input signal (the optical signal output of laser 10) of at least one channel (col. 25, lines 25-30); a photonic output path (the output path that is connected to combiner 20) to carry a photonic output signal (the output optical signal of combiner 20); a modulation synthesizer (16, fig. 1) to provide a modulation waveform (col. 3, lines 30-32); a modulation device (14, fig. 1) configured to modulate the photonic input signal (the optical signal of laser 10) with the modulation waveform to provide the photonic output signal (col. 3, lines 33-52, col. 4, lines 7-17); the modulation waveform configured to shift the wavelength of the channel of the photonic input signal (col. 4, lines 7-17); a wavelength error detector (22, 24, fig. 1) configured to detect channel wavelength error (col. 4, lines 32-40) in the photonic output signal and provide to the modulation synthesizer (16, fig. 1) an error signal

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configured to correct the channel wavelength error in the photonic output signal (col. 4, lines 37-40).

Regarding claim 12, Gertel teaches a phase modulator (col. 4, lines 7-9).

Regarding claim 21, Gertel teaches the wavelength error detector configured to detect wavelength errors in the representative channel (col. 4, lines 26-37).

4. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Noe et al. (US patent No: 5,541,755).

Regarding claim 1, Noe teaches an apparatus for providing a wavelength shifted and stabilized photonic signal ( and 10-14 and fig. 1), comprising: a photonic input path (the path that is connected to laser 1) configured to carry a photonic input signal (the optical signal output of laser 1) of at least one channel (col. 3, lines 25-30); a photonic output path (the output path that is connected to the output of laser 1) to carry a photonic output signal (S1, fig. 1); a modulation synthesizer (7, fig. 1) to provide a modulation waveform (M, 73, fig. 1); a modulation device (col. 3, lines 47-51, note that laser 1 can be connected to an external modulator to provide frequency or phase modulation) configured to modulate the photonic input signal with the modulation waveform (note that frequency and/or phase modulation of the transmission light S can be done directly via an external modulator that is connected to laser) to provide the photonic output signal (S, fig. 1); the modulation waveform (M, 73, fig. 1) configured to shift the wavelength of the channel of the photonic input signal (col. 3, lines 40-47); a wavelength error detector (4, fig. 1) configured to detect channel wavelength error (col. 4, lines 16-32) in the photonic output signal (S, S1, S3, fig. 1) and provide to the modulation synthesizer (7, fig. 1) an

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error signal (52, 71, fig. 1) configured to correct the channel wavelength error in the photonic output signal (col. 3, lines 40-50).

Regarding claim 2, Noe discloses the modulation synthesizer (7, fig. 1) receives a data signal (M, 72, fig. 1) and pre-modulate the modulation waveform in accordance to the data (col. 4, lines 35-39).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gertel et al. (US Patent No: 5,532,857) in view of Harlet et al. (US Patent No: 6,323,978).

Regarding claim 13, Gertel differs from the claimed invention in that Gertel does not specifically disclose the modulation device comprises a quadrature device. Harlet disclose a quadrature modulator (col. 4, lines 50-53 and 308, fig. 3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a quadrature modulator such as the one Harlet for the modulator in the optical transmission system of Gertel in order to provide a modulation system that can be used to add as many channels as desired and to reduce second order distortions.

7. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gertel et al. (US Patent No: 5,532,857) in view of Udd (US Patent No: 5,694,114).

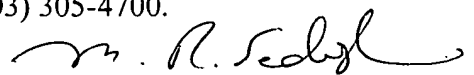
Regarding claims 18-19, Gertel differs from the claimed invention in that Gertel does not specifically disclose the modulation waveform is substantially sawtooth shape, or triangular shape. Udd teaches input data modulation signal (64, fig. 1) in the form of sawtooth or triangular shape ( col. 4, lines 15- 18, col. 6, lines 23-26 and fig. 3A, 3B, 3C). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate sawtooth or triangular input data signals such as the ones of Udd for the input data signal in the optical transmission and modulation system of Gertel in order to provide a simple shift in frequency of optical signal.

8. Claims 3-11, 14-17, 20, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

  
M.R. SEDIGHIAN  
Patent Examiner  
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